

联合收获机驾驶室人机界面布局优先序研究 Study on Priorities of Human-machine Interface in Combine Harvester Cab

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摘要: 为了实现联合收获机驾驶室人机界面的优化设计,以自走式谷物联合收获机为研究对象,从人机工程学角度分析了驾驶室人机界面的元件构成,在调查分析基础上,采用改进的TOPSIS法对人机界面各元件的重要程度进行了分析和排序。根据各元件的优先序进行布局,即将优先序排在同类元件中最前的元件布置在驾驶员最容易伸及或看到的区域,其他元件根据优先序依次布置在次级可伸及区域和可见区域,从而保证驾驶员操作和观察的方便性和舒适性。The structure of human-machine interface in combine harvester cab was analyzed in terms of ergonomics, then, the priorities of the components were calculated using the modified method of TOPSIS, based on the interview and investigation to 2 designers in the corporation and 45 experienced drivers. The results showed that components used in emergency and frequently are prior to others. Therefore the procedure is more scientific and effective combined with both subjective and objective methods, and the conclusion could be applied to design or evaluate the combine harvester cab.

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